PROJECT TITLE: Entomological Research
PROJECT NUMBER: 1101
PROJECT LEADER: D. L. Faustini
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PERIOD COVERED: February, 1988

I. CIGARETTE BEETLE (CB) PHYSIOLOGICAL STUDIES

A. **Objective**: Conduct studies to determine methods for controlling CB infestations in stored tobacco using methoprene on the container surfaces.

B. **Results**: Cardboard cases, proportionately reduced to laboratory size, were treated on the inner surface with 500 and 5000 ppm methoprene. After CB infestation and storage in the laboratory for seven months the cases were opened and evaluated. The control was heavily damaged and an average of 2833 CB's per case were found to be present. In comparison the cases with 500 ppm methoprene averaged 172 CB's/case (light damage to product), and the cases with 5000 ppm methoprene showed very light product damage with only 11 CB's/case.

C. **Plans**: Write a special report.

II. METHOPRENE-TREATED FILM

A. **Objective**: Evaluate methoprene treated film for controlling CB's.

B. **Results**: A report was written summarizing the studies of methoprene-treated films as an ovicide.

III. AGELESS® OXYGEN ABSORBER

A. **Objective**: Determine dose response levels for effective use of two Ageless® (iron oxide) products against the CB.

B. **Results**: Laboratory studies have been initiated.

C. **Plans**: Complete studies and evaluate data by the end of March.

IV. STUDY OF CB INFESTATIONS

A. **Objective**: Determine the origins of CB infestations in cured tobacco.

B. **Results**: Consultations were held within PM and at Universal Leaf regarding monitoring programs.

C. **Plans**: Initiate monitoring program at ULT's Danville facilities.

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V. GAS FLUSHING

A. **Objective**: Evaluate gas flushing as a means to gather data for inert atmosphere chamber certification.

B. **Results**: Equipment has been installed and laboratory studies have been initiated.

C. **Plans**: Evaluate gas mixture equivalent to that produced for inert chambers which are to be used for the treatment of export cut filler.

VI. REFERENCES

1. Lehman, R. M. Notebook No. 8519, pp. 7-9, 13-14.

2. Minor, M. F. Matters on the methoprene-treated film report. Memo to D. L. Faustini; in press.

3. Lehman, R. M. Notebook NO. 8519, pp. 51-52, 54.

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